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Further notes on Phlebotominae from Argentina (Diptera: Psychodidae)

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■ **ABSTRACT.** The following Phlebotominae species are recorded for the first time for Argentina: *Lutzomyia auraensis* (Mangabeira), *Lutzomyia fischeri* (Pinto), *Brumptomyia avellari* (Costa Lima) and *Brumptomyia guimaraesi* (Coutinho & Barretto). The ocurrence of *Lutzomyia cortelezzii* (Brèthes) in northern Argentina and Uruguay is confirmed, and previous records of *Lutzomyia sallesi* (Galvão & Coutinho) for the country are questioned. The potential epidemiological role of *Lutzomyia intermedia* (Lutz & Neiva) concerning leishmaniasis in Argentina is suggested.

KEY WORDS. Phlebotominae. New records. Argentina. Distribution.

■ **RESUMEN. Notas acerca de Phlebotominae de la Argentina (Diptera: Psychodidae).** *Lutzomyia auraensis* (Mangabeira), *Lutzomyia fischeri* (Pinto), *Brumptomyia avellari* (Costa Lima) y *Brumptomyia guimaraesi* (Coutinho & Barretto) se citan por primera vez para la Argentina. Se confirma la presencia de *Lutzomyia cortelezzii* (Brèthes) en el norte del país y en el Uruguay, mientras que se cuestiona la validez de citas previas para la Argentina de *Lutzomyia sallesi* (Galvão & Coutinho). Se sugiere que *Lutzomyia intermedia* (Lutz & Neiva) esté involucrada en la epidemiología de la leishmaniasis en la Argentina.

PALABRAS CLAVE. Phlebotominae. Nuevos registros. Argentina. Distribución.

INTRODUCTION

The Phlebotominae sand flies are notorious vectors of human diseases caused by *Leishmania* protozoa, *Bartonella* bacteria, and numerous arboviruses (Young & Duncan, 1994). Since the publication of Lewis *et al.* (1977), Phlebotominae specialists recognized three New World genera, *Lutzomyia* Franca, *Brumptomyia* Franca & Parrot, and *Warileya* Hertig, belonging the medically important species to the first mentioned genus.

The genus *Lutzomyia* contains the majority of American Phlebotominae, and is presently known in the Neotropics by aproximately 400 species and subspecies reviewed by Young & Duncan (1994). From this large number, only 15 species are known to occur in Argentina, the following 14 mentioned by Young & Duncan (1994): *L. alphabetica* (Fonseca), *L. cortelezzii* (Brèthes), *L. intermedia* (Lutz & Neiva), *L. longipalpis* (L. & N.), *L. migonei* (Franca), *L. misionensis* (Castro), *L. monticola* (Costa Lima), *L. pascalei* (Coutinho & Barretto), *L. pessoai* (C. & B.), *L. quinquefer* (Dyar), *L. sallesi* (Galvão & Coutinho), *L. shannoni* (D.), *L. sordellii* (Shannon & Del Ponte) and *L. whitmani* (Antunez & Coutinho), and *L. puctigeniculata* (Floch & Abonnenc) reported by Salomón (1994).

The genus *Brumptomyia* includes 22 species, from which only *B. pintoi* is present in Argentina. *Warileya* is represented by only six species, which are distributed from Costa Rica to Perú and Bolivia in South America.

A large collecting of Phlebotominae recently carried out by personnel of the Department of Entomology of the Museo de La Plata in the area influenced by the Yacyretá dam lake, and the incorporation to its collection of the specimens formerly deposited in the Instituto de Microbiología "Dr. Carlos G. Malbrán" of Buenos Aires, prompt us to begin with the study of the Phlebotominae fauna of Argentina.

The purpose of this paper is to give the first results of this study, recording for the first time for Argentina *Lutzomyia auraensis* (Mangabeira), *Lutzomyia fischeri* (Pinto), *Brumptomyia avellari* (Costa Lima), and *Brumptomyia guimaraesi* (Coutinho & Barretto), and confirming the ocurrence of *L. cortelezzii* for the north of the country.

MATERIAL AND METHODS

Specimens were captured during field work by using CDC light traps (Service, 1976) exposed for 24h. A 12v/15w light source was supplied by a portable battery. Sand flies were also attracted to the trap by a constant rate of CO_2 liberation of 500 ml/min. The specimens collected were deposited in the collection of the Museo de La Plata, Argentina.

For general phlebotominae terminology see Young & Duncan (1994), containing this paper as well a complete key, illustrations and distribution of the Neotropical *Lutzomyia*, and full references on synonymy of the species of this genus here recorded.

NEW RECORDS

Genus **Lutzomyia** Franca

Lutzomyia (Trichophoromyia) auraensis
(Mangabeira)

Flebotomus auraensis Mangabeira, 1942: 161 (male; Aurá, Belém, Pará, Brazil).

Distribution. Argentina (new record); Bolivia; Brazil; Colombia; Perú; Suriname; Venezuela.

Specimen examined. ARGENTINA. Misiones: Puerto Iguazú, IV-1954, 1 male.

Remarks. The examined male specimen agrees with the original description of *L. auraensis* by Mangabeira (1942). As it is remarked by Young & Duncan (1994), the species is recognized from *Lutzomyia ruii* Arias & Young by the expanded genital filament tips.

Lutzomyia (Pintomyia) fischeri
(Pinto)

Phlebotomus fischeri Pinto, 1926: 373 (male; Butantan, São Paulo, Brazil).

Distribution. Argentina (new record); Brazil; Paraguay, Perú; Venezuela.

Specimens examined. ARGENTINA. Corrientes: Santa Tecla, 19-III-1997, L. Hes, 3 females, CDC light trap.

Remarks. This is one the four species of the subgenus *Pintomyia*. It is easily recognized from the related congeners *Lutzomyia damascenoi* (Mangabeira), *Lutzomyia christenseni* Young & Duncan and *Lutzomyia pessoai* (Coutinho & Barretto) by the palpomere 5 extraordinarely elongated and by the subcylindrical spermatheca.

Lutzomyia (Nyssomyia) intermedia
(Lutz & Neiva)

Flebotomus intermedius Lutz & Neiva, 1912: 92 (male, female; southern Brazil in states of Rio de Janeiro, São Paulo and Minas Gerais).

Distribution. Argentina (Chaco, Corrientes, Jujuy, Misiones, and Tucumán provinces); Brazil; Paraguay.

Specimens examined. More than 500 slide mounted specimens of both sexes from several localities of northern Corrientes and Misiones provinces of Argentina.

Remarks. Rangel *et al.* (1984) found one specimen of *Lutzomyia intermedia* naturally infected with *Leishmania brasiliensis* in a focus of cutaneous leishmaniasis in Jacarepagua, Rio de Janeiro, Brazil. Despite the fact that experimental transmission has not been achieved, Rangel *et al.* (1990) pointed out that epidemiological evidences suggest *L. intermedia* to be the most likely vector of cutaneous leishmaniasis in the state of Rio de Janeiro.

The presumed sanitary importance of *L. intermedia* and the fact that it is the most widely distributed and abundant species of *Lutzomyia* in Argentina, justify the need to perform studies in this country focussed to establish its potential epidemiological role concerning leishmaniasis.

Lutzomyia cortelezzii (Brèthes)

Phlebotomus cortelezzii Brèthes, 1923: 361 (male, female; La Plata, Argentina).

Distribution. Argentina (Buenos Aires, Catamarca, Chaco, Formosa, Jujuy, Salta, Santiago del Estero, and Tucumán provinces); Brazil; ? Perú; Uruguay.

Specimens examined. ARGENTINA. Salta: El Palmar, 7-VIII-1960, García col., 3 males, 1 female; Ing. Juarez, III-1960, 1 male, 5 females; El Bresal, 30-VII-1960, García col., 1 male; Tartagal, 1 female. **Chaco:** Makalle, García y Casal col., 22-VI-1964, 2 females. **Santiago del Estero:** Puente Negro, IV-1943, Ábalos col., 2 males, 1 female. **Tucumán:** Yerba Buena, 20-II-1943, 2 females. **URUGUAY. Montevideo:** 16-II-1930, Cordero col., 1 male, 1 female.

Discussion. Young & Duncan (1994) doubt about previous records of *L. cortelezzii* for Argentina and Uruguay, except for the one corresponding to its type-locality in La Plata (Buenos Aires province).

Galvão & Coutinho (1939) described *L. sallesi* from Aracatuba, state of São Paulo, Brazil, and this species was mentioned for Argentina by Galati *et al.* (1989) and by Young & Duncan (1994), both records based on the same specimen (Argentina, Salta prov., El Palmar, 1960, M. Garcia, 1 male). During our study, we examined a series composed by three males and one female from the same locality, data and collector, belonging these specimens to *L. cortelezzii*. For this reason we confirmed here the ocurrence of *L. cortelezzii* in northern Argentina, and considered the presence of *L. sallesi* in this country as questionable.

Genus **Brumptomyia** Franca & Parrot

Brumptomyia avellari (Costa Lima)

Phlebotomus avellari Costa Lima, 1932: 47 (male).

Distribution. Argentina (new records); Brazil; Colombia; Panamá; Perú.

Specimens examined. ARGENTINA. Corrientes: Santa Tecla 16-XI-1995, Rossi y Spinelli col., 2 males, 3 females, CDC light trap; Ituzaingó, 14-II-1996, Rossi y Spinelli col., 1 male, 2 females, CDC light trap. **Misiones:** Candelaria, V-1996, Rossi y Spinelli col., 2 females; same data except IV-1997, L. Hes col., 1 male; 22-VIII-1997, L. Hes col., 1 male.

Remarks. This species is distinguished from its related congener *B. brumpti* (Larrousse) by the flattened distal half of paramere with scattered hairs.

Brumptomyia guimaraesi
(Coutinho & Barretto)

Phlebotomus guimaraesi Coutinho & Barretto, 1941: 78 (male, female).

Distribution. Argentina (new records); Brazil.

Specimens examined. ARGENTINA. Corrientes: Santa Tecla, 17-III-1994, Rossi y Spinelli col., 3 females, CDC light trap; same data except 16-XI-1995, 14 males, 11 females; 14-II-1996, 2 males; 20-III-1996, 2 males, 2 females; 17-III-1997, F. Krsticevic col., 2 males; IV-1997, 2 males; VIII-1997, 1 male; 23-IX-1997, 5 males, 4 females. **Misiones:** Corpus 19-III-1997, F. Krsticevic col., 1 male, 2 females, CDC light trap.

Remarks. Fraiha Neto *et al.* (1970) recognized the male of *B. guimaraesi* by the following combination of characters: coxite with basal tuft of fine hairs implanted in tubercles, and three or more long setae in distal half; style with two apical spines, and mesal spines implanted in two levels; paramere simple, not bifurcated.

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